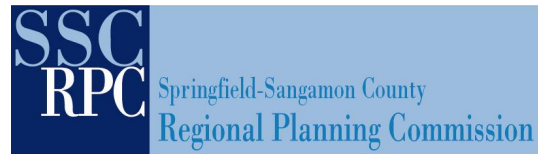


# Information Brief



January 8, 2010

## **Key Findings:**

After reviewing a number of wind energy conversion system ordinances from other county jurisdictions as well as suggested model state codes, the SSCRPC finds that the Sangamon County WECS ordinance is not less restrictive than any of the ordinances studied, and in its totality may be considered more restrictive.

This is particularly the case when considering Sangamon County's setback requirements relative to incorporated areas, and its inclusion of contiguous urban development areas as subject to the same setback as the nearby incorporated areas.

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## **Sangamon County Wind Energy Conversion System Setback Requirements**

### **A Comparison with Some Other Jurisdictions**

Similar to other areas of zoning and land regulation, the Sangamon County Wind Energy Conversion System (WECS) ordinance (Chapter 17.49.010 et seq.) requires certain *setbacks* associated with the location of wind turbines. Setbacks generally refer to the space requirements established around structures or uses that prescribes the distance a structure or use must be from another. Most often these setbacks are designed to address public purposes; such as the side-yard setback requirements in residential zoning areas which are intended to address access to air and light as well as aid in fire safety.

Questions have been raised concerning the setback requirements – i.e., the distance from a feature to a wind turbine tower – in the Sangamon County WECS ordinance and whether they are sufficient. In order to help address this question, the Springfield-Sangamon County Regional Planning Commission (SSCRPC) compared setback requirements in the County's code to other, similar codes in some other jurisdictions (27 counties in Illinois and 5 in other states) as well as in 5 model state codes, including the Illinois model code. The results of this comparison are presented below.

The SSCRPC found that only in rare instances do these other codes exceed the Sangamon County requirements, and in the vast majority of cases the Sangamon code was much more restrictive. We found this to particularly be the case related to setbacks from incorporated areas

The following pages outline the results of our study.

## Comparing Setback Requirements

Comparing and contrasting municipal ordinances is often difficult because there may be many subtleties in specific sections of the codes which have an effect on other sections. It is also difficult because different definitions may be in use affecting the results of the comparison. However, and with this difficulty in mind, the SSCRPC attempted to compare the setbacks of the Sangamon County wind energy ordinance with others, since the question had been raised.

No attempt was made to compare the setbacks in the Sangamon County WECS ordinance with *all* other similar ordinance as that would simply be too great a task. The SSCRPC did, however, look at a number of model ordinances, ordinances from other Illinois counties, and ordinances from counties in other states that had originally guided the development of the Sangamon County WECS ordinance. We would also note that time was insufficient to review the requirements in any great detail; although we believe that the results reported here are still illustrative of the extent to which these requirements are included in other county codes and useful in considering the rigor of the Sangamon ordinance.

Some of the information listed below was collected by Western Illinois University's Illinois Institute of Rural Affairs. The Institute keeps a very useful listing of available Illinois wind farm ordinances and points of contact on its website: [www.illinoiswind.org](http://www.illinoiswind.org). Other information was collected directly by the SSCRPC. The SSCRPC did not seek to compare the County's code with that of urban areas since we believe that projects in these areas must address somewhat different issues than those in rural ones.

## Sangamon County Setback Requirements

The Sangamon County WECS ordinance provides for both setbacks – which establish the distance from a feature to a wind turbine tower – from incorporated areas as well as setbacks from certain property perimeters and structures.

As the table below indicates, the setback from incorporated areas differs in the Sangamon County ordinance based upon the population of the incorporated area. The ordinance also makes a provision for also considering “contiguous urban development” in defining the area perimeter where the incorporated area setback applies. SSCRPC sees these as areas that are adjacent to incorporated areas but not yet incorporated, or areas where significant development has occurred near incorporated areas regardless of adjacency.

| Incorporated Area Setback Provision | Required Setback from Incorporated Areas of 10,000 or More in Population | Required Setback from Incorporated Areas of 10,000 or Less in Population | Contiguous Urban Development Included in Setback Provision?                    |
|-------------------------------------|--|--|--|
| Sangamon County Required Setback    | 1.5 Mile Setback   | 0.5 Mile Setback   | Yes. May not be located “so they interfere with contiguous urban development.” |

The County's code also includes certain setbacks from perimeters and structures. These are listed below. The *WECS Perimeter* is defined in Sangamon County code as the “outer boundaries of the WECS site”, so the perimeter involves a larger area than the point where an individual wind turbine would be located. A *structure* is defined in the County's code as “anything erected, the use of which requires more or less permanent location on the ground; or attached to something having a permanent location on the ground. A sign, billboard, or

other advertising medium detached or projecting shall be construed to be a structure.” Please note that this definition does not limit the setback only to residential structures (which some other WECS ordinances do), but to the principal structure on a relevant parcel.

| Perimeters and Structures Setback Provisions | Required Perimeter Setback                | Required Principal Structures Setback                       | Required Setback from Third Party Utility Lines | Required Setback from Public Roads |
|--|---|---|---|------------------------------------|
| Sangamon County Required Setback             | 1,200 feet. Allows for setback easements. | 1,000 feet or 3 times rotor diameter, whichever is greater. | 1.1 times system height.                        | 1.1 times system height.           |

### Comparison with Sample Ordinances Regarding Incorporated Areas Setbacks

For the purpose of comparison, the SSCRPC considered 37 other ordinances. The first comparison involved 27 other Illinois counties and their inclusion of setbacks from incorporated areas. Of these 27, only 4 (15%) specifically included such a setback. Of these 4, none provided for a greater setback than that included in the Sangamon County WECS ordinance, 3 provided less, and one provided a similar setback distance. None specifically included areas of contiguous urban development.

| Jurisdiction               | Setback from Incorporated Areas  | Contiguous Urban Development Included   |
|----------------------------|--|---|
| <b>Illinois Ordinances</b> |  |   |
| <b>Sangamon County</b>     | <b>1.5 Mile Setback for areas greater than 10,000 in population; 0.5 mile from areas less than 10,000.</b> | <b>Yes. May not be located “so they interfere with contiguous urban development.”</b> |
| Carroll County             | Not Addressed  | Not Addressed   |
| Champaign County           | Not Addressed  | Not Addressed   |
| Coles County               | 1500' from any platted community.  |   |
| Ford County                | 1500'  |   |
| Henry County               | Not Addressed  | Not Addressed   |
| Iroquois County            | Not Addressed  | Not Addressed   |
| Jo Daviees County          | Not Addressed  | Not Addressed   |
| Kankakee County            | Not Addressed  | Not Addressed   |
| Kendall County             | Not Addressed  | Not Addressed   |
| Knox County                | Not Addressed  | Not Addressed   |
| La Salle County            | Not Addressed  | Not Addressed   |
| Lake County                | Not Addressed  | Not Addressed   |
| Lee County                 | Not Addressed  | Not Addressed   |
| Livingston County          | 1.5 mi. from incorporated area   |   |
| Logan County               | Not Addressed  | Not Addressed   |
| Macon County               | Not Addressed  | Not Addressed   |
| Marshall County            | Not Addressed  | Not Addressed   |
| McLean County              | None – Possibly by negotiation.  | None – Possibly by negotiation.   |
| Mercer County              | Not Addressed  | Not Addressed   |
| Moultrie County            | 1500' from incorporated area   |   |
| Ogle County                | As A-1 special use   |   |
| Rock Island County         | Not Addressed  | Not Addressed   |
| Shelby County              | Not Addressed  | Not Addressed   |
| Stark County               | Not Addressed  | Not Addressed   |
| Stephenson County          | Not Addressed  | Not Addressed   |
| Tazewell County            | Not Addressed  | Not Addressed   |
| Woodford County            | Not Addressed  | Not Addressed   |

The SSCRPC then compared the Sangamon County ordinance to 4 often used state model ordinances as well as the Illinois state model ordinance. The Illinois model was developed for the Illinois Clean Energy Community Foundation by the law firm of Baker & McKenzie. The SSCRPC found that none of these ordinances included setbacks from incorporated areas.

| Jurisdiction                          | Setback from Incorporated Areas   | Contiguous Urban Development Included  |
|---------------------------------------|---|--|
| <b>Sangamon County</b>                | 1.5 Mile Setback for areas greater than 10,000 in population; 0.5 mile from areas less than 10,000. | Yes. May not be located "so they interfere with contiguous urban development." |
| <b>Wisconsin Model Ordinance</b>      | Not Addressed   | Not Addressed  |
| <b>Mass. Model Ordinance</b>          | Not Addressed   | Not Addressed  |
| <b>Michigan Model Ordinance</b>       | Not Addressed   | Not Addressed  |
| <b>North Carolina Model Ordinance</b> | Not Addressed   | Not Addressed  |
| <b>Illinois Model Ordinance</b>       | Not Addressed   | Not Addressed  |

Finally, the SSCRPC compared the County's ordinance to 5 county ordinances from other states to determine if those codes were significantly different. These ordinances were randomly selected based upon an internet search. We found that only 2 of these ordinances included provisions for setbacks from incorporated areas, and neither were as restrictive as the Sangamon County provisions.

| Jurisdiction             | Setback from Incorporated Areas   | Contiguous Urban Development Included  |
|--------------------------|---|--|
| <b>Sangamon County</b>   | 1.5 Mile Setback for areas greater than 10,000 in population; 0.5 mile from areas less than 10,000. | Yes. May not be located "so they interfere with contiguous urban development." |
| <b>Calumet Co., WI</b>   | 1000'   |  |
| <b>Fillmore Co., MN</b>  | Not Addressed   | Not Addressed  |
| <b>Martin Co., MN</b>    | Not Addressed   | Not Addressed  |
| <b>Washtenaw Co., MI</b> | Not Addressed   | Not Addressed  |
| <b>Renville Co., MN</b>  | 1/4 mile  |  |

## Other Perimeter and Structure Setbacks

As with setbacks from incorporated areas, the SSCRPC compared the Sangamon County provisions with the restrictions in the wind farm ordinances from other Illinois counties, the state model ordinances, and the county ordinances from other states selected at random.

Since many ordinances establish setbacks based upon WECS height, we had to make some assumptions in order to compare the ordinances. Assuming a general turbine height of 500 – 600 ft. (pylon plus blades), we found no Illinois county with a perimeter setback requirement as restrictive as the Sangamon County one. Most do not deal with perimeters at all, addressing only property line setbacks, and require a setback of only 1.1 times system height. Three of the 27 (11%) require greater distances from principal/primary structures (though this

may be some what complicated by their limiting the requirement to residential structures while the Sangamon ordinance does not), 2 (7.4%) require a greater distance from utility lines and towers, and 2 (7.4%) require a greater distance from roads. In almost every case, the Sangamon County ordinance requirements equal or exceed that of the other Illinois counties reviewed.

| Jurisdiction              | Perimeter or Property Lines                | Principal/Primary Structures   | Third Party Utility Lines or Towers | Public Roads                     |
|---------------------------|--|--|-------------------------------------|----------------------------------|
| <b>Sangamon County</b>    | 1,200 feet. Setback easement allowed       | 1,000 feet or 3 times rotor diameter: whichever is greater                                   | 1.1 x system height                 | 1.1 x system height              |
| <b>Carroll County</b>     | 1.1x system height                         | 1.1x system height   |                                     | 1.1x system height               |
| <b>Champaign County</b>   | Same as I-2 industrial                     | Same as I-2 industrial   | Same as I-2 industrial              | Same as I-2 industrial           |
| <b>Coles County</b>       | 1.1x system height or 350'                 | 1400' – 1.0 MW turbines<br>1000' -- < 1.0 MW   | 1.1x system height                  | 1.1x system height               |
| <b>Ford County</b>        | 1.0x system height                         | 1000'  | 1.1x system height                  | 1.1x system height               |
| <b>Henry County</b>       | 100' from tip                              |  | 1.1x system height                  | 1000'                            |
| <b>Iroquois County</b>    | 1.1x system height                         | 1.1x system height   | 1.1x system height                  | 1.1x system height               |
| <b>Jo Daviees County</b>  | 1.1x system height                         | 1400'  | 1.1x system height                  | 1.1x system height               |
| <b>Kankakee County</b>    | 1.1x system height                         | 600' (zero setback from any prop. Line shared by 2 or more participating parties)            | 1.1x system height                  | 1.1x system height               |
| <b>Kendall County</b>     |  |  | 1.5x system height                  | 1.5x system height               |
| <b>Knox County</b>        | 1000'                                      |  | 1.1x system height                  | 1.1x system height               |
| <b>La Salle County</b>    | 1.1x system height                         | 750'   | 1.25x system height                 | 1.1x system height               |
| <b>Lake County</b>        | As AG, RE, E zoning requirements           | As AG, RE, E zoning requirements   | As AG, RE, E zoning requirements    | As AG, RE, E zoning requirements |
| <b>Lee County</b>         | 350'                                       |  | 350'                                | 350'                             |
| <b>Livingston</b>         | 1.1x system height                         | 3x system height or 1200'  | 1.1x system height                  | 1.1x system height               |
| <b>Logan County</b>       | 1.1x system height                         | 750' or 1.1x system height   |                                     | 1.1x system height               |
| <b>Peoria County</b>      | 1.1x system height                         | 1.1x system height; 750' adjoining property dwelling unit                                    | 1.1x system height                  | 1.1x system height               |
| <b>Macon County</b>       | 1.5x system height                         | 1,000' and 1.1x system height  |                                     | 1.1x system height               |
| <b>Marshall County</b>    | 1.0x system height                         | 1000'  | 1.0x system height                  | 1.0x system height               |
| <b>McLean County</b>      | Not within 2000' of an R-1 or R-2 district | By hearing.  | By hearing                          | By hearing                       |
| <b>Moultrie County</b>    | 1.1x system height                         | 1.0 MW or less, 1000'; More than 1.0 MW, 1400'   | 1.1x system height                  | 1.1x system height               |
| <b>Ogle County</b>        | As AG-1 Special Use                        | As AG-1 Special Use  | As AG-1 Special Use                 | As AG-1 Special Use              |
| <b>Peoria County</b>      | 750'                                       | 1.1x system height   | 1.1x system height                  | 1.1x system height               |
| <b>Rock Island County</b> | 100' from tip                              | 1.1x system height   | 1.1x system height                  | 1.1x system height               |
| <b>Shelby County</b>      | 1.1x system height                         | 1.1x system height   | 1.1x system height                  | 1.1x system height               |
| <b>Stark County</b>       | 1.0x system height                         | 1000'  | 1.1x system height                  | 1.1x system height               |
| <b>Stephenson County</b>  | 1.1x system height                         | 1.1x system height   | 1.1x system height                  | 1.1x system height               |
| <b>Tazewell County</b>    | 1.1x system height                         | 1.1x system height (zero for shared properties). 750' for adjoining property dwelling units. | 1.1x system height                  | 1.1x system height               |
| <b>Woodford County</b>    | 1.1x system height                         | 1.1x system height (zero for shared properties). 750' for adjoining property dwelling units. | 1.1x system height                  | 1.1x system height               |

In regard to the various state model ordinances, we found no ordinance that exceeded the Sangamon County requirement on perimeter setback, though it is possible that the North Carolina ordinance could, depending upon the height of the system being considered. The Wisconsin model could possibly be close to or exceed the Sangamon ordinance in regard to structure setback, and the North Carolina ordinance does exceed the Sangamon County ordinance in regard to the public road setback. However, as with the Illinois counties, the local ordinance appears very comparable.

| Jurisdiction                          | Perimeter or Property Lines           | Principal/Primary Structures                                | Third Party Utility Lines or Towers | Public Roads             |
|---------------------------------------|---------------------------------------|---|-------------------------------------|--------------------------|
| <b>Sangamon County</b>                | 1,200 feet. Setback easement allowed. | 1,000 feet or 3 times rotor diameter: whichever is greater. | 1.1 times system height.            | 1.1 times system height. |
| <b>Illinois Model Ordinance</b>       | 1.1x system height.                   | 1000' or 1.1x system height.                                | 1.1x system height.                 | 1.1x system height.      |
| <b>Wisconsin Model Ordinance</b>      | 1.1x system height.                   | 2x system height or 1000'.                                  | 1.1x system height.                 | 1.1x system height.      |
| <b>Mass. Model Ordinance</b>          | 100'                                  | 1.5x blade tip height.                                      |                                     | 100'                     |
| <b>Michigan Model Ordinance</b>       | 1.1x system height.                   |   |                                     | 1.1x system height.      |
| <b>North Carolina Model Ordinance</b> | 1.5x system height.                   | 1.1x system height.   |                                     | 1.5x system height.      |

In looking at the sample of county ordinances from other states, we found that only one (Washtenaw Co., MI) could potentially provide for equal to or greater setbacks from perimeter or property lines, one (Calumet Co., WI) clearly exceeds the local ordinance's provisions concerning setback from structures (though, again, this setback may only relate to residential structures), and none could be determined to exceed the Sangamon ordinance in the other two areas.

| Jurisdiction             | Perimeter or Property Lines           | Principal/Primary Structures                                | Third Party Utility Lines or Towers | Public Roads             |
|--------------------------|---------------------------------------|---|-------------------------------------|--------------------------|
| <b>Sangamon County</b>   | 1,200 feet. Setback easement allowed. | 1,000 feet or 3 times rotor diameter: whichever is greater. | 1.1 times system height.            | 1.1 times system height. |
| <b>Calumet Co., WI</b>   | 1.1x system height.                   | 1,800'  |                                     | 1.1x system height.      |
| <b>Fillmore Co., MN</b>  | 1.1x system height.                   | 750'  |                                     | 1.1x system height.      |
| <b>Martin Co., MN</b>    | 1.1x system height.                   | 750'  |                                     | 1.1x system height.      |
| <b>Washtenaw Co., MI</b> | 1.5x system height.                   |   |                                     |                          |
| <b>Renville Co., MN</b>  |                                       | 750'  |                                     | 1.1x system height.      |

Overall, it appears to the Commission that the Sangamon County ordinance is not less restrictive than any of the ordinances studied, and in its totality is more restrictive: at least in terms of the considered setback requirements.

This report prepared by E. Norman Sims, SSCRPC, Executive Director

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The Springfield-Sangamon County Regional Planning Commission (SCRPC) serves as the joint planning body for Sangamon County and the City of Springfield, as well as the Metropolitan Planning Organization for transportation planning in the region.

The Commission has 17 members including representatives from the Sangamon County Board, Springfield City Council, special units of government, and six appointed citizens from the city and county. The Executive Director is appointed by the Executive Board of the Commission and confirmed by the Sangamon County Board.

The Commission works with other public and semi-public agencies throughout the area to promote orderly growth and redevelopment, and assists other Sangamon County communities with their planning needs. Through its professional staff, the SSCRPC provides overall planning services related to land use, housing, recreation, transportation, economics, environment, and special projects. It also houses the Sangamon County Department of Zoning which oversees the zoning code and liquor licensing for the County.

The Commission prepares area-wide planning documents and assists the County, cities, and villages, as well as special districts, with planning activities. The staff reviews all proposed subdivisions and makes recommendations on all Springfield and Sangamon County zoning and variance requests. The agency serves as the county's Plat Officer, Floodplain Administrator, Census coordinator, and local A-95 review clearinghouse to process and review all federally funded applications for the county. The agency also maintains existing base maps, census tract maps, township and zoning maps and the road name map for the county.

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